TOAST 2020 - Updates

		2019	2020
TOAST	*Data Timeframe*	**Fiscal Year 2019 (Jul 1-Jun 30):** Bottlenecks/TTP **Calendar Year 2018 (Jan 1-Dec 31):** Safety Performance/VPL/ Freight Corridors/Incident Clearance/ Secondary Crashes	**Calendar Year 2019 (Jan 1-Dec 31):** *All Data sets*
Bottlenecks	*Metric*	A potential bottleneck is detected when speeds on a segment drop to 65% of reference speeds and cause at least a two-minute delay.	A potential bottleneck is detected when speeds on a segment drop to 65% of reference speeds and cause at least a two-minute delay. *(No Change)*
	Source	INRIX Roadway Analytics Bottlenecks Tool with XD-level data	INRIX Roadway Analytics Bottlenecks Tool with XD-level data • *Improved segment matching* between INRIX XD and ODOT routes
	Parameters	n/a	n/a *(No Change)*
	Calculations	Sum *top 5* Bottleneck Impact Factors per corridor Impact Factor = Avg duration (minutes) x Avg max length x Number occurances	Sum *ALL* Bottleneck Impact Factors per corridor Impact Factor = Avg duration (minutes) x Avg max length x Number occurances
TTP	*Metric*	Percent of Time motorists can travel within 90% of the routes freeflow speed	Percent of Time motorists can travel within 90% of the routes freeflow speed *(No Change)*
	Source	INRIX XD-level data (Speed, Travel Time, Reference Speed, C-Value)	INRIX XD-level data (Speed, Travel Time, Reference Speed, C-Value) • *Improved segment matching* between INRIX XD and ODOT routes
	Parameters	• C-Value > 0 (to only include real-time speeds) • Granularity = 15 minutes • Time: 5a-9p • Days: ALL	• C-Value > 0 (to only include real-time speeds) • Granularity = *5 minutes* • Time: 5a-9p • Days: *Weekdays Only*
	Calculations	% of Time (TTT/RTT) ≥ 0.9 for each segment (weighted), where: • TTT = Target Travel Time (minutes) = (segment length ÷ Reference Speed mph) x 60 minutes/hr • RTT = Real Travel Time (minutes) *from INRIX data*	% of Time (TTT/RTT) ≥ 0.9 for each segment (weighted), where: • TTT = Target Travel Time (minutes) = (segment length ÷ Reference Speed mph) x 60 minutes/hr • RTT = Real Travel Time (minutes) *from INRIX data* *(No Change)*
TSMO Safety *(formerly: Safety Performance)*	*Metric*	Potential for Safety Improvement Density (PSI Density) as compared to other peer groups	*Crash Impact Factor per mile*
	Source	Safety Analyst Program - Office of Highway Safety	*OH-1 Crash data & CMS annual data - Office of Traffic Managment*
	Parameters	• Urban/Rural Locations • Crash Frequency • Fatal/Injury Indicators	• *3 Years worth of crash data* • *Fatal/Severe Injury ratio* • *Volume/Capacity ratio*
	Calculations	Safety Analyst	*Crash Impact Factor = (3 year Total Number Crashes x V/C Ratio x Fatal/Severe Ratio) ÷ corridor length*
Volume Per Lane	*Metric*	Weighted volume per lane	Weighted volume per lane *(No Change)*
	Source	Congestion Management Data (CMS) - Office of Statewide Planning and Research	Congestion Management Data (CMS) - Office of Statewide Planning and Research *(No Change)*
	Parameters	n/a	n/a *(No Change)*
	Calculations	SUM (weighted VPL per CMS segment)	SUM (weighted VPL per CMS segment) *(No Change)*
Freight Corridors	*Metric*	Percent Trucks	Percent Trucks *(No Change)*
	Source	Congestion Management Data (CMS) - Office of Statewide Planning and Research	Congestion Management Data (CMS) - Office of Statewide Planning and Research *(No Change)*
	Parameters	n/a	n/a *(No Change)*
	Calculations	% = Truck Volume ÷ Total Volume	% = Truck Volume ÷ Total Volume *(No Change)*
Incident Clearance	*Metric*	Time from report of an incident until the scene is cleared	*Impact of the sum* of time from reported incidents until scene cleared *weighted based on number of crashes in a cluster along the corridor*
	Source	OH-1 Crash Data	OH-1 Crash Data *(No Change)*
	Parameters	Num Crashes > 1 per TOAST Corridor	*Cluster Parameters:* • *Minimum number crashes = 1* • *Cluster radius = 0.5 miles*
	Calculations	Average of Incident Clearance (minutes)	*Impact Factor = SUM (SUM Incident Clearance minutes x Cluster Ratio)*
Secondry Crashes	*Metric*	Percent of crashes that occurred as a result of a previous incident	Percent of crashes that occurred as a result of a previous incident *(No Change)*
	Source	OH-1 Crash Data	OH-1 Crash Data *(No Change)*
	Parameters	Time = Incident Clearance + buffer (30 mins to 2 hrs) • + 30 min standard • + 30 min Urban County (LUC, CUY, SUM, FRA, MOT, HAM) • + 30 min AM & PM Rush hours (6:30a-9a; 3-7p) (+1 hr Urban)	Time = Incident Clearance + buffer (30 mins to 2 hrs) • + *30 min* Rural County or *+1 hr* in Urban County (LUC, CUY, SUM, FRA, MOT, HAM) • + *1 hr* for AM & PM Rush hours (6:30a-9a; 3-7p)
		Distance = radius of 2 miles for same route as primary incident	Distance = radius of 2 miles for same route as primary incident
	Calculations	% = Number Secondary Crashes/Total Crashes	% = Number Secondary Crashes/Total Crashes *(No Change)*

Secondary Crashes — 2019 buffer table:

	Rural County	Urban County
Non-Rush Hour	30	60
AM/PM Rush Hour	60	120

Secondary Crashes — 2020 buffer table:

	Rural County	Urban County
Non-Rush Hour	30	60
AM/PM Rush Hour	90	120